Gold Standard Analytics

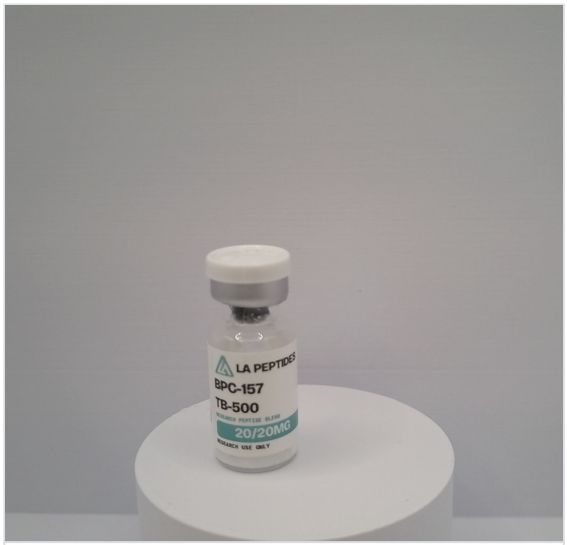
Gold Standard Analytics LLC, Houston, TX

CERTIFICATE OF ANALYSIS

Report GSA-COA-CUST-LA-2218BPCTB-20261109-7 · issued Nov 23, 2026

LA Peptides

PRODUCT	ORDER	SAMPLE
BPC-157 / TB-500 blend	GSA-2026-000080	LA2218-BPCTB
LABEL	**LOT**	**ISSUED**
BPC-157 / TB-500 blend	2618	Nov 23, 2026



THE SAMPLE AS RECEIVED

IDENTITY ✓

BPC-157, TB-500

both declared peptides found

PURITY

99.70 %

HPLC-UV, 214 nm, 2 injections

ENDOTOXINS ✓

< 0.050 EU/mL

Pass; spike recovery 59 %

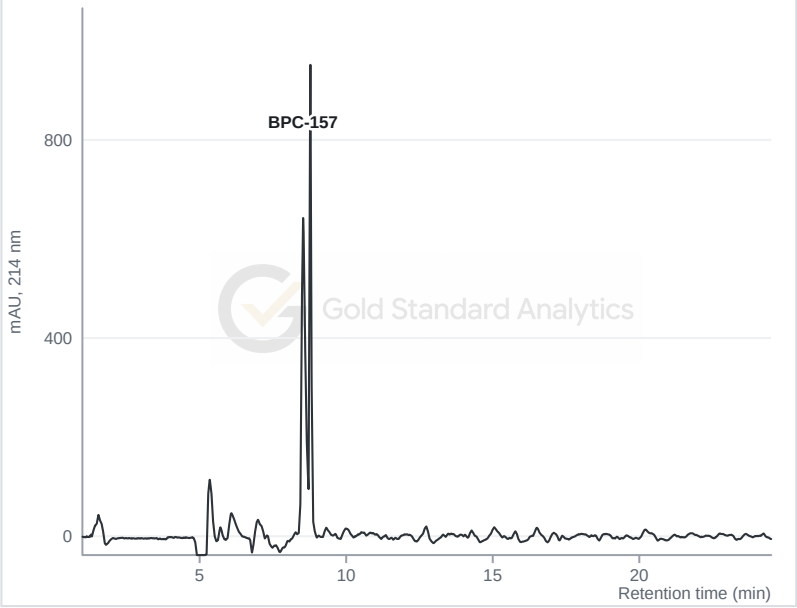
STERILITY ✓

No growth

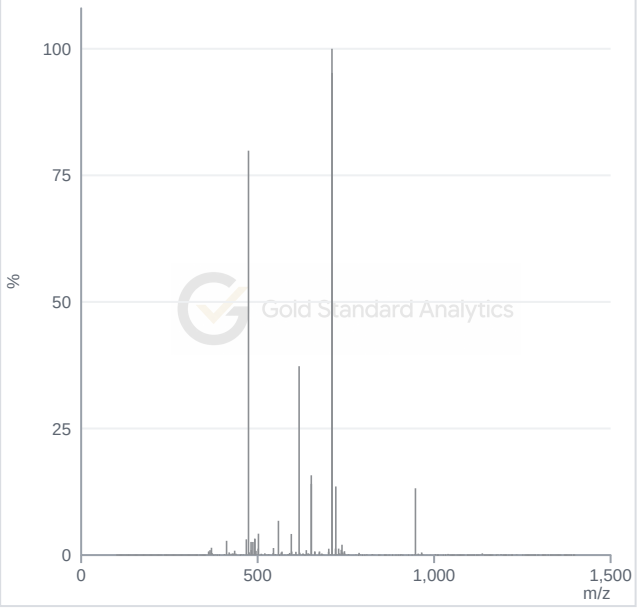
Pass; both canisters, 14 days

✓ **Heavy metals** USP <232>, ICP-MS: Pb, Cd, Hg, As, Co, V, Ni — **Pass**

HPLC CHROMATOGRAM UV, 214 nm



MASS SPECTRUM main peak (8.53 min)



RELEASED BY

Ian Ebert
Chemist & Lab Lead · Nov 24, 2026

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Results are not covered by ISO/IEC 17025 accreditation. Results relate only to the sample as received and tested.

The sample

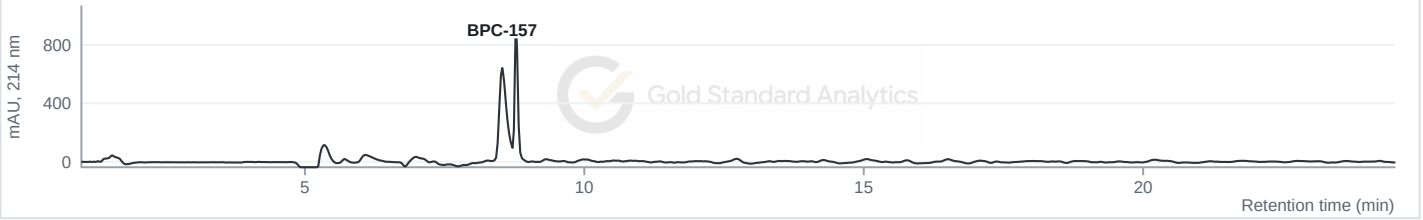
Lot 2618 · LA Peptides

Customer	**LA Peptides**	Lot	**2618**
Order	**GSA-2026-000080**	Prepared	**Vial contents dissolved in 2 mL water with 0.1 % formic acid, then diluted 1 in 10, 6 Nov 2026**
Sample	**LA2218-BPCTB**	Tested	**09 Nov 2026**
Label	**BPC-157 / TB-500 blend**	Tests	**Identity, Purity, Impurity breakdown, Bacterial endotoxins, Sterility, Elemental impurities**

Graphs

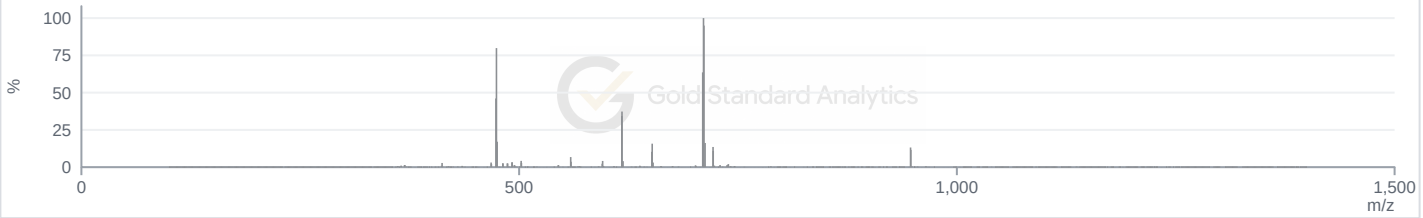
HPLC CHROMATOGRAM

HPLC chromatogram (UV, 214 nm) · mAU, 214 nm against Retention time (min)



MASS SPECTRUM

Mass spectrum of the main peak (8.53 min) · Counts against m/z



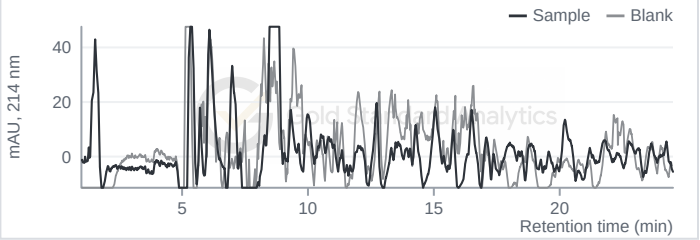
Results

Identity	**Both declared peptides found** by their molecular mass: BPC-157 (m/z 710.4 [M+2H]2+ and 474.0 [M+3H]3+; mass about 1,419) and TB-500 as full-length thymosin beta-4 (m/z 993.7, 828.2 and 710.1, its 5+, 6+ and 7+ ions; mass about 4,963).
Purity	**99.70 %** by HPLC with UV detection at 214 nm (the two declared peptides as a share of the UV peak area of the peptide group they come off in); mean of two injections of the same solution (96.58 and 97.03 %). One impurity is counted, listed below. Several small later peaks stay below the baseline limit and carry no BPC-157 or TB-500 mass, so they are not counted. The large peak at about 5.5 min comes from the mobile phase, not the sample: it also appears when nothing is injected, and it is not counted.
Composition	Share of the UV peak area at 214 nm: BPC-157 58 %, TB-500 39 %. UV area is not the same as weight: each peptide absorbs UV light differently.
Bacterial endotoxins	**< 0.050 EU/mL; spike recovery 59%** . Pass.
Sterility	**No growth in either canister after 14 days** . Pass.
Elemental impurities (USP <232>)	**Pb < 0.5 µg/g; Cd < 0.2 µg/g; Hg < 0.3 µg/g; As < 1.5 µg/g; Co < 0.5 µg/g; V < 1 µg/g; Ni < 2 µg/g (Agilent ICP-MS)** . Pass.

Zoomed views

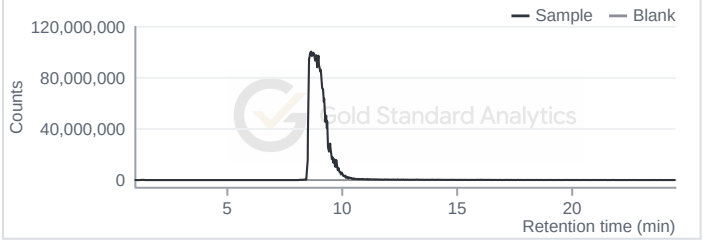
HPLC, SMALL PEAKS

Zoomed in on the small peaks (5 % of the main peak) · mAU, 214 nm against Retention time (min)



ION TRACE

Ion trace, m/z 710.4 (BPC-157 [M+2H]2+): sample vs blank · Counts against Retention time (min)



Impurities

The peak counted besides the declared peptides:

PEAK (MIN)	AMOUNT	WHAT IT IS
9.0-9.8	0.30 %	TB-500 with an added mass of 42 (about 5,005): an extra acetyl group, a synthesis by-product. It elutes just after TB-500, so this includes the end of the TB-500 peak.

> Amounts are each peak's share of the UV peak area at 214 nm (mean of two injections). Also found by mass, but too small to measure by UV: shorter pieces of BPC-157 (masses about 1,079 and 1,320), BPC-157 that has lost one water molecule (about 1,401), BPC-157 with an added mass of 42 (about 1,461) and two BPC-157 molecules joined together (about 2,821).

How it was tested

Liquid chromatography with UV and mass-spectrometry detection: Agilent 1290 Infinity II LC with a 6490 triple-quadrupole mass spectrometer. Column Altura Peptide Plus, 2.1 x 150 mm, 2.7 µm, 45 °C; water and acetonitrile, each with 0.1 % formic acid. Purity: UV peak area at 214 nm after subtracting a blank run of the same sequence. Identity: molecular mass from the mass spectrum. Bacterial endotoxins: endotoxin reader, 0.050 EU/mL limit; result reported as printed by the reader, with spike recovery. Sterility: membrane filtration (canisters), 14-day incubation. Elemental impurities (USP <232>): Agilent ICP-MS; Pb, Cd, Hg, As, Co, V, Ni.

Notes

Results apply only to the sample as received and tested. The test solution was injected about 3 days after it was prepared (kept in the cooled autosampler); peptides can change slowly in solution, so a freshly prepared solution may read slightly higher. The charts show the first injection.

Release

This report is signed electronically at release. The signature is printed on page 1, and the release record, added as the last page, gives the date and the verification code.

Gold Standard Analytics

Release record

goldstandardanalytics.com

Report GSA-COA-CUST-BPC-157-TB-500-UPL-f065dbfe9d9c · Certificate GSA-2026-875094

Customer and order	LA Peptides · Custom sample (no order)
Sample and report	BPC-157/TB 500 · Certificate of Analysis
Report reference	GSA-COA-CUST-BPC-157-TB-500-UPL-f065dbfe9d9c
Certificate accession	GSA-2026-875094
Released and signed by	Ian Ebert, Chemist & Lab Lead
Date and time (UTC)	2026-11-24 23:34:41Z
Signature meaning	Approved for release. The signer reviewed this report and approved its release to its customer.
Approval reference	eb2c140c-baf8-4c2d-9e55-9c52b3544116
Electronic signature	Signed electronically in a signed-in GSA staff account.
Original report SHA-256	ed79f26ec8b827e094638464e69e897284ee534e595080df103144fe3a04d123
Verify this certificate	https://goldstandardanalytics.com/coa/GSA-2026-875094

Scan to view this certificate online

Signature



Ian Ebert, Chemist & Lab Lead

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